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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,023	09/12/2003	Jan Vetrovec	7784-000169CPA	9292
27572	7590	12/07/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			PALADINI, ALBERT WILLIAM	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,023

Applicant(s)

VETROVEC, JAN

Examiner

Albert W Paladini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/30/04, 8/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-47 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-40 of U.S. Patent No. 6,625,19

Key limitations of the claims "at least one undoped optical medium" and "a source of optical pump radiation" are contained in the independent claims of U.S. Patent No. 6,625,193. The other key limitation of "said undoped optical medium operating to transport optical pump radiation into laser gain region medium and to pump said laser gain medium to a laser transition level" is implicit in claim 1 of U.S. Patent No. 6,625,193, which recites "said undoped optical medium transporting said optical pump radiation into said laser gain medium." This interpretation of the claim is supported on lines 9-12 in column 11 of U.S. Patent No. 6,625,193, which state "Optical radiation 36 absorbed by dopant species in laser gain medium 26 pumps the dopant level to a laser

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transition. This allows the laser gain medium 26 to serve as an amplifier of coherent optical radiation."

Relevant Prior Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Drake (6094447) discloses a laser system for reducing wavefront distortion in a high gain diode pumped laser where, the laser medium providing this high-gain may comprise a material such as neodymium yttrium-aluminum garnet (Nd:sup.3+ :YAG) or Erbium doped optical fiber (Er:sup.3+ :silica), but it is well known in the art that any suitable material capable of maintaining an inverted population of energy states when optically-pumped will suffice. Those laser media utilizing Nd:sup.3+ :YAG is common, given the substantial optical gain near desired wavelengths near the 1.064 .mu.m range. Additionally, Nd:sup.3+ :YAG laser media provide linearity of pumping rate with respect to inverted population given its four-level transition system that is also well known to those skilled in the art.

Peressini (6418156) discloses an optically pumped laser with an embodiment, which integrates a pump cavity with a solid-state gain medium that has a three-level or quasi three-level lasing transition, such as Yb:YAG (ytterbium-doped yttrium aluminum garnet). Other embodiments use other solid state gain media, such as co-doped gain media in which a first ion (a "pump active ion") absorbs energy from the optical pump, and transfers this energy to a second ion (a "lasing ion"), which lases.

Motoshima (6657778) discloses an optical amplification repeater, which uses a doped fiber where the gain of the doped fiber is in proportion to density difference between the pumped or stimulated state or level at which the laser transition takes place and the ground state level. In general, the stimulated state level and the ground state level can each be divided finely into sublevels in view of the Stark effect.


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4. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (572) 272-3748. The examiner can normally be reached from 7:30 to 3:30 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (572) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

November 30, 2004


Albert W. Paladini
Primary Examiner
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